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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,233	09/25/2003	Vibhor Julka	4740-223	8712

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COATS & BENNETT, PLLC  
1400 Crescent Green, Suite 300  
Cary, NC 27518

EXAMINER
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CASCA, FRED A

ART UNIT	PAPER NUMBER
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2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/06/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/672,233

Applicant(s)

JULKA ET AL.

Examiner

Fred A. Casca

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 16-23, 25-40 and 43 is/are rejected.
- 7) ☒ Claim(s) 14, 15, 24, 41 and 42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/13/04</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections – 35 U.S.C. 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 17 is rejected under 35 U.S.C. 102(e) as being anticipated by Sayeedi (U.S. Pub. No. 2003/0063584 A1).

Referring to claim 17, Sayeedi discloses a method of managing dormant handoffs of mobile stations at a wireless communication network Packet Control Function (PCF) (figures 1-3, abstract, paragraph 2 “dormant mode, packet data mobile handoffs”), the method comprising:

recognizing that a mobile station undergoing dormant handoff has multiple packet data service instances (paragraph 2-9); and sending an indication of the multiple packet data service instances to a Base Station (BS) supporting the dormant handoff of the mobile station (figures 1-3, paragraphs 2-9, figures 1-3, and paragraph 16, “mobile station (MS) requests a dormant mode handoff to a new base site controller”).

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 8-13, 16, 18-23, 25, 28-40 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sayeedi (U.S. Pub. No. 2003/0063584 A1) in view of Lancelot et al (US Patent No. 6026086).

Referring to claim 1, Sayeedi discloses a method of managing dormant handoffs of mobile stations at a wireless communication network Base Station (BS) (abstract, paragraph 2 “dormant mode, packet data mobile handoffs”), the method comprising: initiating dormant handoff of a mobile station that is undergoing a packet data mobility event responsive to receiving a first dormant handoff request from the mobile station for a first packet data service instance of the mobile station (paragraph 2); and recognizing that the mobile station has additional packet data service instances requiring dormant handoff (paragraphs 2-9, figures 1-3, and paragraph 16, “mobile station (MS) requests a dormant mode handoff to a new base site controller”) and selectively assigning a traffic channel to the mobile station to cause the mobile station to send additional packet data service instances over the assigned traffic channel (paragraphs 2-9, figures 1-3, and paragraph 16, “BSC receives the Origination message, which indicates . . . whether MS 140 has data ready to send. If MS 140 has data ready to send, then a traffic channel will be required . . . to establish this channel”).

Sayeedi does not specifically disclose assigning a traffic channel to the mobile station so that the mobile station can send additional dormant handoff requests (sending control signals over a traffic channel), as claimed.

Lancelot discloses recognizing that a mobile station requires a traffic channel over which to send control signals, and sending control channels over a traffic channel (col. 6, lines 36-54, "the secondary station 110 requests an assignment of a traffic channel, and then transmits a registration message over the assigned traffic channel of the plurality of traffic channels", note that the request made by secondary station 110 prompts the recognition that a need for traffic channels is indicated, and subsequently a traffic channel is assigned).

It would have been obvious to one of the ordinary skills in the art at the time of invention to modify the method of Sayeedi by incorporating the teachings of Lancelot, and consequently providing the method of Sayeedi to transmit handoff request signals over the traffic channel, for the purpose of reducing overhead and preserving the control channel and consequently providing efficient resource allocation.

Referring to claim 2, the combinations of Sayeedi/Lancelot disclose the method of claim 1, and further disclose recognizing that the mobile station has additional packet data service instances requiring dormant handoff comprises receiving a multiple service instance indicator in a message returned by a Packet Control Function (PCF) in response to the BS initiating dormant handoff of the mobile station (Sayeedi, paragraphs 2-9, figures 1-3, and paragraph 16, note that any indication or request for packet data service instances requiring dormant handoff inherently is communicated via the PCF).

Referring to claim 3, the combinations of Sayeedi/Lancelot disclose the method of claim 1, and further disclose selectively assigning a traffic channel to the mobile station comprises assigning the traffic channel if a total number of multiple service instances for the mobile station exceeds a threshold (Sayeedi, paragraphs 2-9, figures 1-3, and paragraph 16, note that a control signal transmission over a traffic channel has been disclosed in the rejection of claim 1, and further assigning a condition based on a threshold value is well known in the art, thus, it would have been obvious to one of the skills in the art to base the assignment of the traffic channel upon a threshold value).

Referring to claim 4, the combinations of Sayeedi/Lancelot disclose the method of claim 1, and further disclose selectively assigning a traffic channel to the mobile station comprises assigning the traffic channel if the mobile station has two or more packet data service instances (Sayeedi, paragraphs 2-9, figures 1-3, and paragraph 16, and also please see the rejection of claim 3. Note that a two or three value of packet data service is referred to as a threshold value).

Referring to claim 5, the combinations of Sayeedi/Lancelot disclose the method of claim 1, and further disclose selectively assigning a traffic channel to the mobile station comprises selectively assigning or not assigning a traffic channel to the mobile station based on resource availability at the BS (Sayeedi, paragraph 16 and Lancelot, col. 6, lines 36-54, note it is inherent that a channel is not assigned when there is not any channel available).

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Referring to claim 6, the combinations of Sayeedi/Lancelot disclose the method of claim 1, and further discloses selectively assigning a traffic channel to the mobile station comprises selectively assigning or not assigning a traffic channel to the mobile station further based how many additional packet data service instances the mobile station has (Sayeedi, paragraph 16 and Lancelot, col. 6, lines 36-54, note it is inherent that a channel is not assigned when there is not any packet data service instance).

Referring to claim 8, the combinations of Sayeedi/Lancelot disclose the method of claim 1, and further disclose receiving a first dormant handoff request from the mobile station for a first packet data service instance of the mobile station comprises receiving an Origination message from the mobile station over a common access channel of the BS (Sayeedi, paragraphs 2-9, figures 1-3, and paragraph 16).

Referring to claim 9, the combinations of Sayeedi/Lancelot disclose the method of claim 1, and further disclose receiving the additional dormant handoff requests as Enhanced Origination messages from the mobile station over the assigned traffic channel (Sayeedi, paragraphs 2-9, figures 1-3, and paragraph 16-19).

Referring to claim 10 the combinations of Sayeedi/Lancelot disclose the method of claim 1, and further disclose determining that the Origination message is a dormant handoff request by inspecting a data ready/not ready indicator in the Origination message (Sayeedi, paragraphs 23, and 2-9, figures 1-3, and paragraph 16-19).

Referring to claim 11, the combinations of Sayeedi/Lancelot disclose the method

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of claim 1, and further disclose initiating dormant handoff of each additional packet data service instance responsive to receiving each additional dormant handoff request (Sayeedi, and 2-9, figures 1-3, and paragraph 16-19).

Referring to claim 12, the combinations of Sayeedi/Lancelot disclose the method of claim 1, and further disclose receiving each additional dormant handoff request comprises receiving an Enhanced Origination message for each additional dormant handoff request over the assigned traffic channel (Sayeedi, paragraphs 23, and 2-9, figures 1-3, and paragraph 16-19, Lancelot, col. 6, lines 36-54).

Referring to claim 13, the combinations of Sayeedi/Lancelot disclose the method of claim 1.

The combinations of Sayeedi/Lancelot do not specifically disclose retaining information obtained during a prior hard handoff of the mobile station regarding a number of packet data service instances associated with the mobile station. It would have been obvious design choice to modify Saheed/Lancelot's invention by retaining information obtained during a prior hard handoff of the mobile station regarding a number of packet data service instances associated with the mobile station, since applicant has not disclosed by retaining information obtained during a prior hard handoff of the mobile station regarding a number of packet data service instances associated with the mobile station solves any stated problems or is for any particular purpose and it appears the dormant handoff would perform equally well without any knowledge of prior hard handoff of the mobile station regarding a number of packet data service instances associated with the mobile station.



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Referring to claim 16, the combinations of Sayeedi/Lancelot disclose the method of claim 13.

The combinations of Sayeedi/Lancelot do not specifically disclose retaining information obtained during a prior hard handoff of the mobile station regarding a number of packet data service instances associated with the mobile station comprises retaining service instance information received from a source BS during the prior hard handoff of the mobile station.

It would have been obvious design choice to modify Saheed/Lancelot's invention by retaining information obtained during a prior hard handoff of the mobile station regarding a number of packet data service instances associated with the mobile station comprises retaining service instance information received from a source BS during the prior hard handoff of the mobile station, since applicant has not disclosed by retaining information obtained during a prior hard handoff of the mobile station regarding a number of packet data service instances associated with the mobile station solves any stated problems or is for any particular purpose and it appears the dormant handoff would perform equally well without any knowledge of prior hard handoff of the mobile station regarding a number of packet data service instances associated with the mobile station.

Referring to claim 18, Sayeedi discloses the method of claim 17.

Sayeedi does not specifically disclose the BS assigns a traffic channel to the mobile station as claimed by the applicant.

Lancelot discloses recognizing that a mobile station requires a traffic channel over which to send control signals, and sending control channels over a traffic channel (col. 6,

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lines 36-54, "the secondary station 110 requests an assignment of a traffic channel, and then transmits a registration message over the assigned traffic channel of the plurality of traffic channels", note that the request made by secondary station 110 prompts the recognition that a need for traffic channels is indicated, and subsequently a traffic channel is assigned).

It would have been obvious to one of the ordinary skills in the art at the time of invention to modify the method of Sayeedi by incorporating the teachings of Lancelot, and consequently providing the method of Sayeedi to assign a traffic channel to the mobile station responsive to receiving the indication from the PCF, and further comprising suppressing a subscriber accounting message that is normally sent by the PCF to a Packet Data Serving Node (PDSN) as part of assigning traffic channels to mobile stations, for the purpose of reducing overhead and preserving the control channel and consequently providing efficient resource allocation.

Referring to claim 19, the combinations of Sayeedi/Lancelot disclose the method claim 18, and further disclose sending a subscriber accounting message responsive to detecting data transfer to or from the mobile station for any packet data service instance (paragraphs 2-9 and figures 2-3).

Referring to claim 20, the combinations of Sayeedi/Lancelot disclose the method claim 17, and further disclose recognizing that a mobile station undergoing dormant handoff has multiple packet data service instances comprises recognizing an indication of multiple packet data service instances in a registration reply message returned by a Packet Data Serving Node (PDSN) as part of re-registering a first one of the multiple

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packet data service instances (paragraphs 2-9 and figures 2-3).

Referring to claim 21, the combinations of Sayeedi/Lancelot disclose the method claim 20, and further disclose sending an indication of the multiple packet data service instances to a Base Station (BS) supporting the dormant handoff of the mobile station comprises passing the indication of the multiple packet data service instances received from the PDSN along to the BS unless the PCF has already set up an A8 connection for the mobile station (figures 2-3, and paragraphs 2-9 and 16, and 13).

Referring to claim 22, the combinations of Sayeedi/Lancelot disclose the method of claim 17, and further disclose sending an indication of the multiple packet data service instances to a Base Station (BS) supporting the dormant handoff of the mobile station comprises sending a multiple service instance count to the BS (paragraphs 13-19, and 23-25).

Referring to claim 23, claim 23 defines a method of managing dormant handoffs reciting features analogous to the features of managing dormant handoff method of claim 13. Thus the combinations of Sayeedi/Lancelot disclose all elements of claim 23 (please see the rejection of claim 13 above).

Referring to claims 25, 29, and 30, claims 25, 29, and 30 define a method of managing dormant handoffs, improving dormant handoff, and a base station controller for dormant handoff respectively, reciting features analogous to the features of managing dormant handoff method of claim 1. Thus the combinations of Sayeedi/Lancelot disclose all elements of claims 25, 29 and 30.

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Referring to claim 28, the combinations of Sayeedi/Lancelot disclose the method of claim 25.

The combinations of Sayeedi/Lancelot do not disclose suppressing the indication of multiple packet data service instances in subsequent registration reply messages corresponding to additional registration request messages received for any additional packet data service instances associated with the mobile station.

It would have been obvious design choice to modify the method of Sayeedi/Lancelot by suppressing indication of multiple packet data service instances in subsequent registrations since applicant has not disclosed doing so would solve any stated problems or is for any particular purpose and it appears the dormant handoff would perform equally well without any suppressing indication of multiple packet data service.

Referring to claims 31-40 and 43, claims 31-40 and 43 define a base station controller for use in a wireless communication network reciting features analogous to the features of the dormant handoff method of claims 4-13 and 16 respectively. Thus, the combinations of Sayeedi/Lancelot disclose all elements of claims 31-40 and 43 (please the rejection of claims 4-13 and 16 above).

5. Claims 7 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sayeedi (U.S. Pub. No. 2003/0063584 A1) in view of Lancelot et al (US Patent No. 6026086), and further in view of well known prior art (MPEP 2144.03).

Referring to claim 7, the combinations of Sayeedi/Lancelot disclose the method of claim 1.

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The combinations of Sayeedi/Lancelot do not specifically disclose counting subsequent dormant handoff requests sent by the mobile station over the assigned traffic channel and releasing the traffic channel once the count equals the number of additional packet data service instances.

The examiner takes official notice of the fact that the concept of using counters for assigning and releasing traffic resources in communication is well known in the art.

Thus, it would have been obvious to one of the ordinary skills in the art at the time of invention to modify the method of Sayeedi/Lancelot by implementing the well-known concept of counting and thereby providing a more efficient resource allocation system.

Referring to claims 26 and 27, the combinations of Sayeedi/Lancelot disclose the method of claim 25. The combinations of Sayeedi/Lancelot do not specifically disclose a service instance count value included in the registration reply, multiple packet data service instance in the registration replay message.

The examiner takes official notice of the fact that instance count values and multiple packet data service in the registration message are well known in the dormant handoffs. Thus it would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method Sayeedi/Lancelot for the purpose of providing an efficient dormant handoff method.

*Allowable Subject Matter*

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6. Claims 14, 15, 24, 41 and 42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid, can be reached at (571) 272-7922. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
LESTER G. KINCAID  
SUPERVISORY PRIMARY EXAMINER